

A review of the genus *Euros* Hy. Edwards (Lepidoptera: Noctuidae: Apameiini) with description of one new species

J. T. TROUBRIDGE

Canadian National Collection of Insects, Arachnids, and Nematodes, Biodiversity Program, Agriculture and Agri-Food Canada, K.W. Neatby Building, Central Experimental Farm, Ottawa, Ontario, Canada K1A 0C6.
E-mail: troubidgej@agr.gc.ca

Abstract

The Nearctic members of the genus *Euros* Hy. Edwards, 1881 are revised to include three species, with *Euros osticollis* described as new. The adults and male genitalia are illustrated.

Key words: *Euros*, new species, California, Oregon

Intorduction

Euros Hy. Edwards, 1881, is a Nearctic genus that includes three species (one described here as new) with a distribution apparently limited to western Oregon and northern California. All three appear to be scarce and highly localized, with few specimens in collections. Nothing is known of the life histories or biologies, and females have not been found.

Members of the genus are small-sized moths (forewing length 8–10 mm) with bare eyes. In the male genitalia, the costa of the valvae is broadly sclerotized along the basal two thirds and bends dorsally at its apex to form a rounded process. The digitus arises below this process, and a fleshy, fingerlike ampulla is present near the apex of the clasper. The clasper lies along the valve and diverges from the valve to form a short spine below the digitus. Sclerites extend from the juxta laterally along either side of the annulus. The vesica is somewhat stomach shaped and bends ventrally with a bulbous cornutus.

Materials and methods

Specimens were examined from the following collections:

- AMNH American Museum of Natural History, New York, USA;
 BMNH The Natural History Museum, London, U.K.;
 CNC Canadian National Collection of Insects and Arachnids, Ottawa, Canada;
 JTT Personal collection of J. T. Troubridge, Ottawa, Ontario, Canada;
 USNM National Museum of Natural History, Washington, United States.

Dissection of genitalia and terms for genital structures and wing markings follow Lafontaine (2004).

Results

Key to the species

1. Head and prothoracic collar bone white.....*osticollis*
- Head and prothoracic collar rusty brown 2
2. Forewing red and orange; hindwing dark gray brown with fringe red *proprius*
- Forewing orange brown and ochre; hindwing and fringe medium brown.....*cervina*

Euros Hy. Edwards, 1881

Type species: *Euros proprius* Hy. Edwards, by monotypy.

Protophana Hampson, 1906. Type species: *Herrichia cervina* Hy. Edwards, by original designation.

Euros proprius Hy. Edwards

(Figs. 1, 4)

Euros proprius Hy. Edwards, 1881. Holotype male, AMNH [examined].

Diagnosis. Forewing length 9–10 mm. *Euros proprius* is the most distinctive species in the genus. The red and orange forewing and red hindwing fringe easily separate it from the other species. In the male genitalia, the ampulla is about as broad as it is long, much longer in *E. osticollis* and *E. cervina*.

Type locality. Strawberry Valley, Siskiyou Co., California.

Distribution and habitat. *E. proprius* has been found near streams in dry forests in the northern Sierra Nevada, California where I have found it in association with *Paeonia brownii* Douglas ex Hooker (Paeoniaceae).

***Euros osticollis* Troubridge, new species**

(Figs. 2, 5)

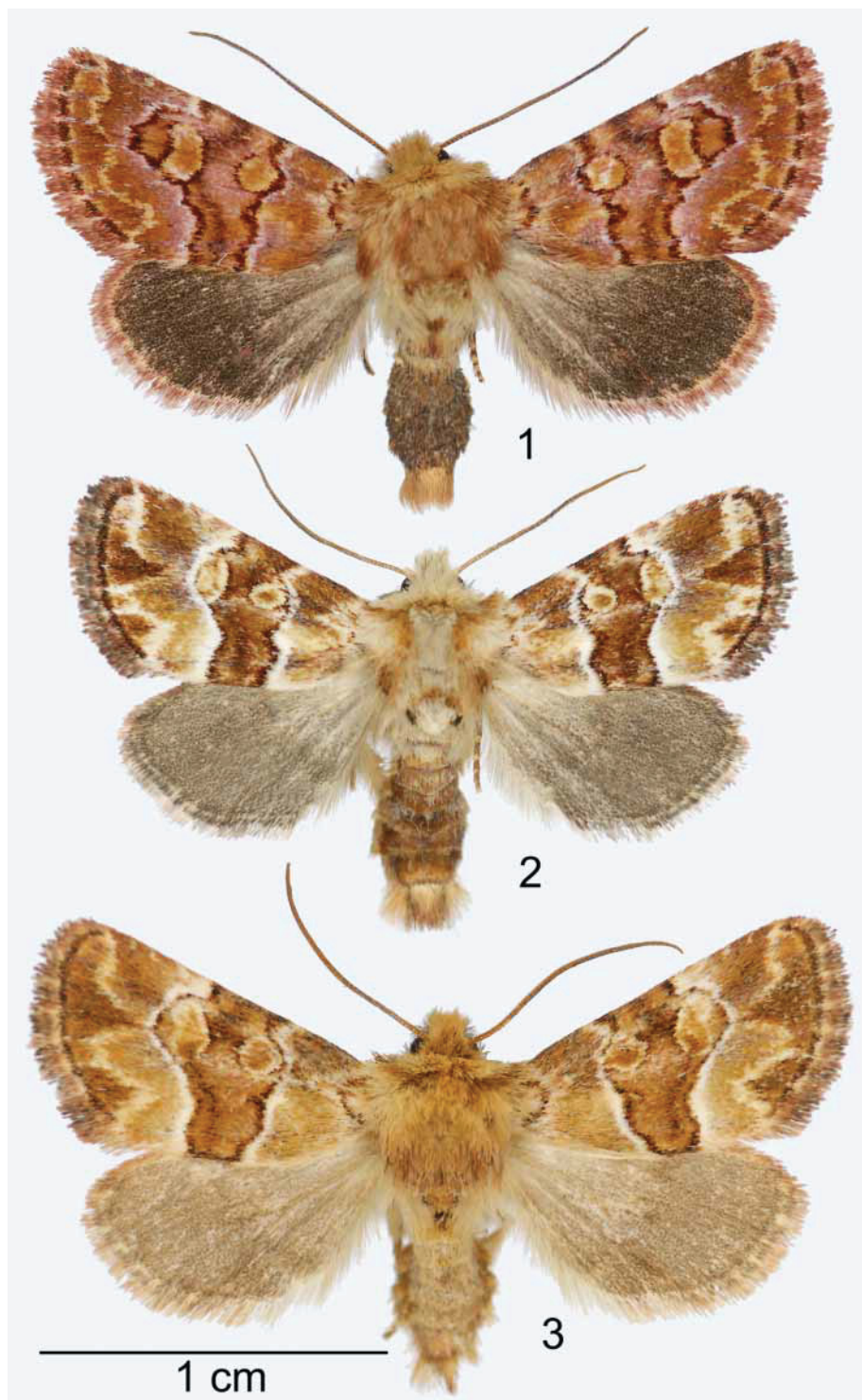
Diagnosis. *Euros osticollis* is easily separated from the other two *Euros* species by the bone white color of its head and prothoracic collar (rusty brown in the other species). The hindwing is gray brown, as in *E. proprius* (medium brown in *E. cervina*), but the fringe is gray, not red as in *E. proprius*. In the male genitalia, the digitus is much narrower than those of the other species and the ampulla is very narrow.

Description. Forewing length 8–9 mm. Male antenna filiform, ciliate; eye orbicular, bare; head, palpi and prothoracic collar bone white; thorax and tegulae bone white, bordered with rust colored scales; abdomen light gray brown. Dorsal forewing ground color rusty brown; orbicular spot circular, yellow with rusty brown center, edged thinly with dark rust; reniform spot similar in coloration to orbicular spot but more completely filled with yellow scales; antemedial line dark rust, edged proximally with white scales; mesial band light rust; obscure median line dark rust; postmedial line dark rust proximally, white distally; light yellow subterminal line serrate, area distal to subterminal line rust colored with area proximal to this line lighter rust; marginal line dark rust; fringe a mix of gray brown and reddish scales. Dorsal hindwing even dark gray brown; fringe pale gray brown with darker median line.

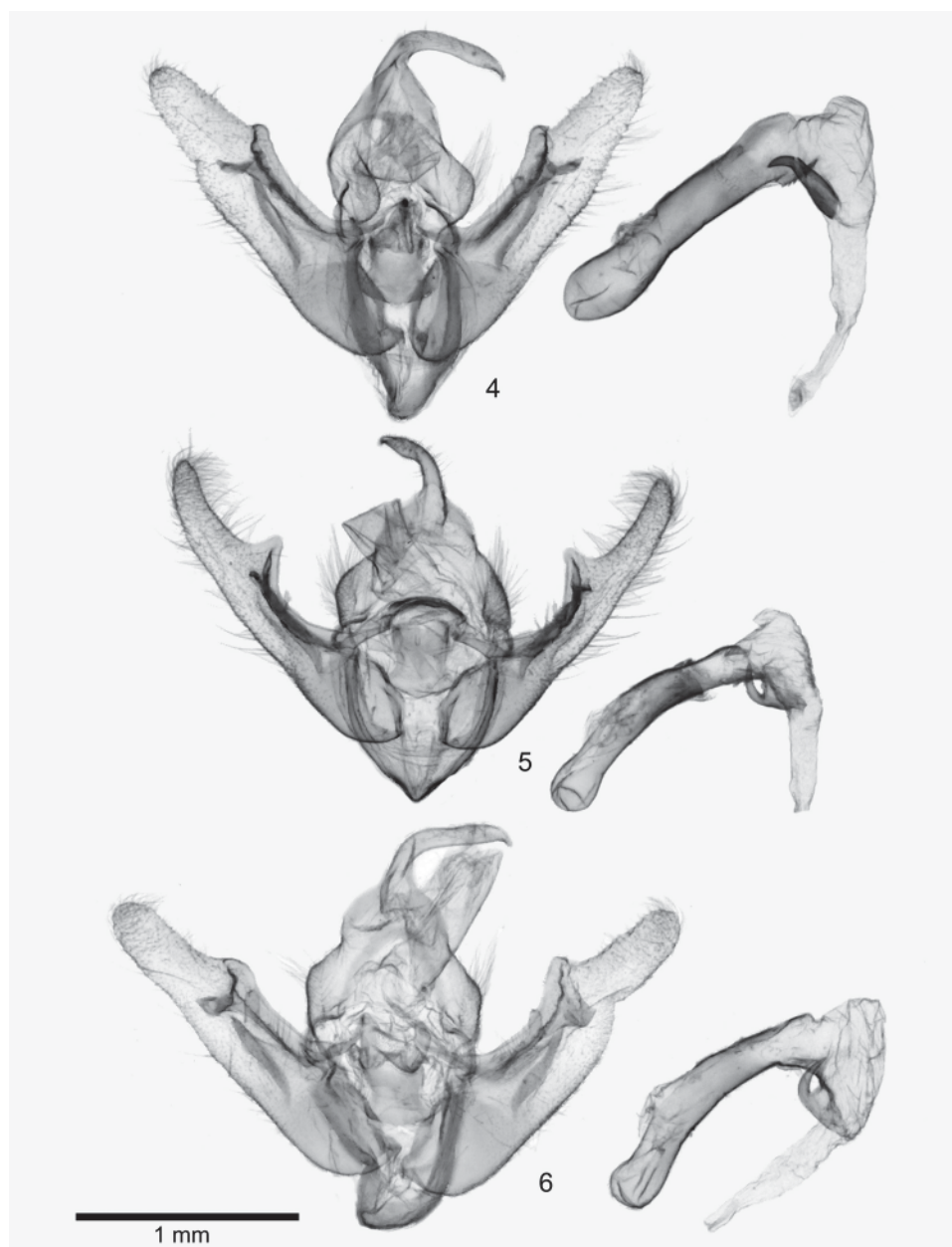
Male genitalia (Fig. 5). Costa of valve broadly sclerotized in basal two thirds, bending dorsally to form sclerotized claw. Digitus arises as small spine on fleshy mound below this claw. Small, fingerlike ampulla arises on dorsal margin of clasper near costa. Apex of clasper spinelike, pointing toward tip of valve, terminating below costal process. Uncus narrow with pointed tip. Juxta with lateral sclerotized arms extending onto annulus. Vesica bending ventrally and narrowing to ductus seminalis with subbasal dorsal diverticulum; large lateral subapical cornutus projecting anteriorly and curving dorsally from large sclerotized base; basal plate with saw-teeth on base anteriorly. Female genitalia unknown.

Type material. Holotype male: USA, Oregon, Josephine Co., Illinois River, 42°45' N 123°41' W, 3 August 1998, J. Troubridge (JTT). Paratypes: **Oregon**: 3 males, same data as holotype; 2 males, Josephine Co., Illinois River, 8 Dollar Mtn., 4 August 1995, J. Troubridge; 13 males, Josephine Co., 8 Dollar Rd., 42°14' N 123°40' W, 1500', 27 July 2001, J. Troubridge; 4 males, Josephine Co., 8 Dollar Rd., 42°14' N 123° 41' W, 1125', 29 August 2002, J. Troubridge. Paratypes in the CNC and JTT.

Derivation of the name. The name refers to the bone color of the prothoracic collar, a distinctive characteristic of this species.



FIGURES 1–3. Adults of *Euros* species. 1, *E. proprius*, Plumas Co., California; 2, *E. osticollis*, Josephine Co., Oregon; 3, *E. cervina*, Curry Co., Oregon.



FIGURES 4–6. Male genitalia of *Euros* species. 4, *E. proprius*; 5, *E. osticollis*; 6, *E. cervina*.

Distribution and habitat. *Euros osticollis* occurs along streams and seeps in association with *Darlingtonia californica* Torr. (Sarraceniaceae) in southwestern Oregon. The larval host plant is unknown, but the presence of *Darlingtonia* in a wetland indicates the proper habitat for this species.

***Euros cervina* (Hy. Edwards)**

(Fig. 3, 6)

Herrichia cervina Hy. Edwards, 1890. Holotype male, BMNH [photo examined].

Diagnosis. Forewing length 10 mm. This species is easily recognized by the rusty orange-brown color of the head, prothoracic collar, thorax, and forewing. The hindwing is medium brown (not gray brown) with concolorous fringe. In the male genitalia, the digitus is at least twice as broad as those of *E. proprius* and *E. osticollis*, and the ampulla is fingerlike as in that of *E. osticollis*, but much broader.

Type locality. Mt. Shasta district, California.

Distribution and habitat. *Euros cervina* has been collected in riparian areas in western Oregon and northern California.

Acknowledgments

I thank M. G. Pogue (USDA, USNM) and E. L. Quinter (AMNH) for allowing access to their collections.

References

- Edwards, H. (1881) New genera and species of North American Noctuidae. *Papilio*, 1, 19–28.
Edwards, H. (1890) Some apparently new Noctuidae in the collection of the British Museum. *Entomologica Americana*, 6, 114–115.
Hampson, G.F. (1906) *Catalogue of the Lepidoptera Phalaenae in the British Museum*. Volume 6. Taylor and Francis. London 532 pp, xiv, plates 96–107.
Lafontaine, J.D. (2004) Noctuoidea: Noctuidae (part), Noctuinae Agrotini. In: Dominick, R.B. *et al.* (Eds.), *The Moths of North America*, Fascicle 27.1. Allen Press, Lawrence, Kansas, 385 pp.